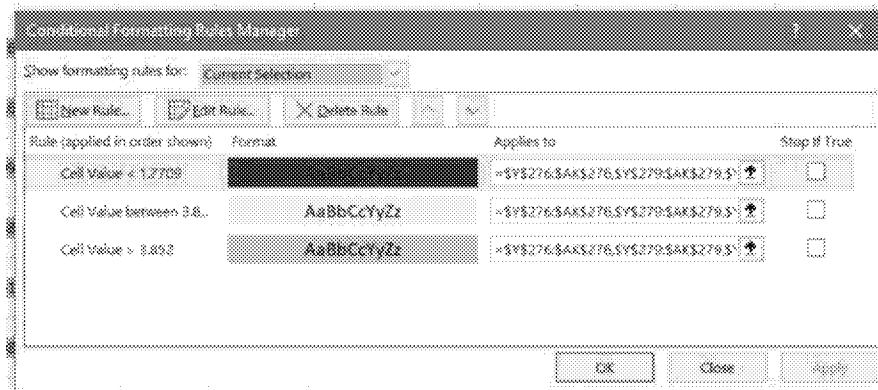|	
From:	Tong-Argao, Sania [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=71D206F3E09B445FBABA2DCFCFB510A5-TONG-ARGAO, SANIA]
Sent:	3/25/2020 11:27:56 PM
To:	Washington, John [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fdc3e8ce9f1d45c4894881ff420ca104-Washington, John]; Davis, Mary J. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5a11c3a4da6248dfbaecd3465fe1ebc3-Davis, Mary]
CC:	Stuart, Brittany [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6320e90a5ccd4554805142bc094c3026-Stuart, Brittany]; Schumacher, Brian [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c2d457e4a6684028801b188422df52a7-Schumacher, Brian]; Stevens, Caroline [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=dfd9eb36db0a44eaa6cabf85f3cf0550-Stevens, Caroline]
Subject:	RE: QA review question for PFAS manuscript
Attachments:	200323PostQA_ClearedLegacyPFCAs_NJ SoilsStats recal_STA.xlsx; 200323 NJSoilPolyethers allrepsSignifRecal JWW_MJBD check_STA.xlsx

Hello John and Mary,

Using the provided files, I conducted a narrowly focused review by taking the following steps. I have attached the corresponding files with file name as noted. Please note that I did NOT conduct any other type of review for these data sets nor did I check the color coding applied to any other part of the data set besides the final table that is used for reporting results (i.e., I didn't check the color coding applied to the pooled variance, mean, or sample data).

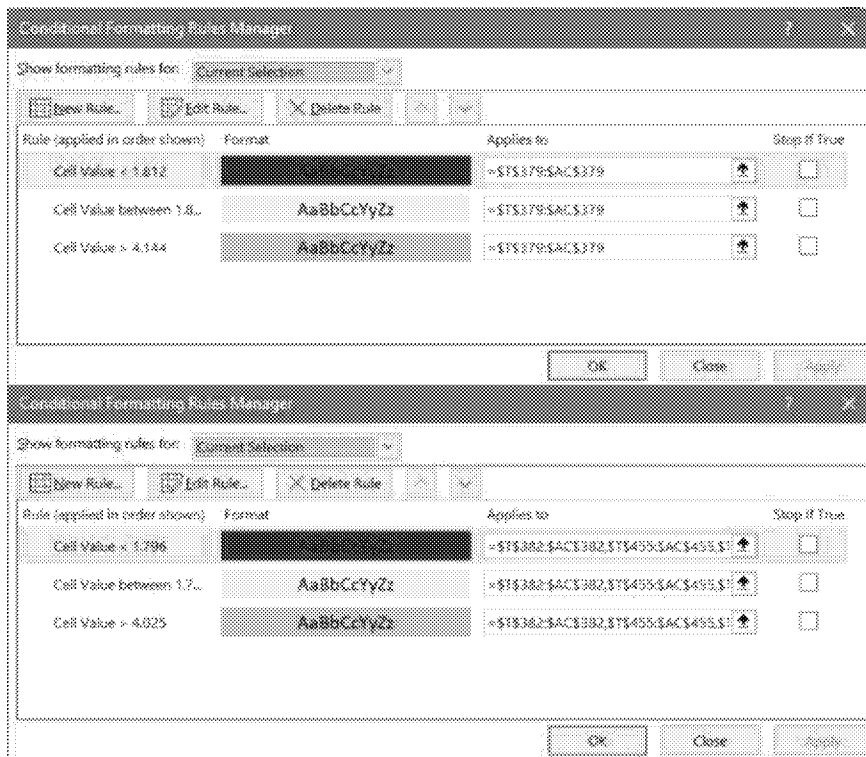**NJ Legacy PFCAs in Soil – File: 200323PostQA_ClearedLegacyPFCAs_NJ SoilsStats recal_STA.xlsx**
- Spot checked the formulas for Mean (both sample and process blanks), Pooled Variance, and T-Test
- Copied values of T-Test and placed them below (starting in Cell Y276) and used the Excel Conditional Formatting feature to apply the color coding based on the critical value of 't' as provided in the worksheet.

- Copied over values and color coding from the Dry-Soil Concentrations (starting in Cell AO10) and placed them next to the T-Test values for comparison (starting in Cell AO276).
- Compared the color coding between T-test results that I applied conditional formatting to against Dry-Soil Concentrations to check for correct application of the colors.
- **OBSERVATIONS**: No discrepancies were found.

NJ Polyethers in Soil – File: 200323 NJSoilPolyethers allrepsSignifRecal JWW_MJBD check_STA.xlsx
- Spot checked the formulas for Mean (both sample and process blanks), Pooled Variance, and T-Test
- Copied values of T-Test and placed them below (starting in Cell T379) and used the Excel Conditional Formatting feature to apply the color coding based on the critical value of 't' as provided in the worksheet. Different formatting rules used for SS1 and the rest of the samples.

- Copied over values and color coding from the Estimated Soil Concentrations (starting in Cell AX12) and placed them next to the T-Test values for comparison (starting in Cell AL379).
- Compared the color coding between T-test results that I applied conditional formatting to against Estimated Soil Concentrations to check for correct application of the colors.
- OBSERVATIONS **Ex. 5 Deliberative Process (DP)**
  - **Ex. 5 Deliberative Process (DP)**

Please let me know if you have any questions.

Best,
Sania
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From: Washington, John <Washington.John@epa.gov>
Sent: Tuesday, March 24, 2020 11:21 AM
To: Stevens, Caroline <Stevens.Caroline@epa.gov>; Tong-Argao, Sania <Tong-Argao.Sania@epa.gov>
Cc: Stuart, Brittany <Stuart.Brittany@epa.gov>; Davis, Mary J. <davis.maryj@epa.gov>; Schumacher, Brian <Schumacher.Brian@epa.gov>
Subject: Re: QA review question for PFAS manuscript

From: Stevens, Caroline <Stevens.Caroline@epa.gov>
Sent: Tuesday, March 24, 2020 10:24 AM
To: Tong-Argao, Sania <Tong-Argao.Sania@epa.gov>
Cc: Stuart, Brittany <Stuart.Brittany@epa.gov>; Washington, John <Washington.John@epa.gov>; Davis, Mary J. <davis.maryj@epa.gov>; Schumacher, Brian <Schumacher.Brian@epa.gov>
Subject: QA review question for PFAS manuscript

Good morning, Sania,

John Washington and co-authors are working on addressing reviewer comments for a manuscript submitted to *Science*. In doing so, they found an error in the calculation of statistical significance for replicates. In particular, some sample concentrations were previously treated as non-detects, because the average value of the three replicates was incorrectly deemed not statistically different from the blanks. With the corrected calculations for significance level, more of these concentration values meet the criteria for acceptance as a measured value above the detection limit. The calculated concentration values haven't changed—the only change is that more values are significant detects.

For the purposes of the paper, the net effect is that the color codes will change in Tables S4 and S5 of the Supporting Info (attached). Some values that were previously shaded red will turn yellow, and some values that were previously shaded yellow will turn green.

I've copied Brittany, because she conducted the original QA review of the data. She is also a coauthor on the paper.

We are wondering what type of QA review is needed for the corrected calculations in the spreadsheet. I'm not sure if you can make it, but Brian just sent out an invitation for a phone call to discuss this issue at 11 am today.

Thanks,
Caroline